# MOMENTUM
## Routine Immunization Transformation and Equity

# Country Program in Review

November 2021–September 2022

VIETNAM

November 2022

USAID FROM THE AMERICAN PEOPLE

MOMENTUM A Global Partnership for Health and Resilience


ĐẢNG CỘNG SẢN VIỆT NAM QUANG VINH MUÔN NĂM !
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## MOMENTUM Routine Immunization Transformation and Equity

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## JSI RESEARCH & TRAINING INSTITUTE, INC.

JSI Research & Training Institute, Inc. (JSI) is a public health management consulting and research organization dedicated to improving the health of individuals and communities. JSI collaborates with government agencies, the private sector, and local nonprofit and civil society organizations to improve quality, access, and equity of health systems worldwide.

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# Acronyms

| | |
|---|---|
| **CDC** | Centers for Disease Control and Prevention |
| **EP** | Northern and Central Regional Expanded Programs on Immunization |
| **GSP** | good storage practice |
| **GVN** | Government of Vietnam |
| **JSI** | JSI Research & Training Institute, Inc. |
| **MOH** | Ministry of Health |
| **NEP** | National Expanded Program on Immunization |
| **NIHE** | National Institute of Hygiene and Epidemiology |
| **TWG** | technical working group |
| **USAID** | U.S. Agency for International Development |
| **WHO** | World Health Organization |

# Results

## Reaching the Unreached: COVID-19 Vaccinations

Through household surveys conducted by the project, over **1.6 million unvaccinated or not fully vaccinated people** were identified in all disadvantaged villages and communes in the five project provinces.

The project supported **1,318 mobile vaccination sites** in five hard-to-reach, mountainous provinces.

The project supported the government of Vietnam to administer **737,877 COVID-19 vaccination doses** at these sites.

## Strengthening the Health System

The project created or revised **1,485 COVID-19 microplans** to:

- Increase accuracy of forecasting and planning.
- Reduce vaccine wastage.
- Provide standardized tools.
- Increase buy-in from national and local government agencies.
- Enable proactive resource assessment and needs forecasting.

The project trained a total of **7,712 health workers and volunteers** on COVID-19 vaccine-related topics.

- **5,229 health care workers** trained remotely and/or in-person.
- **2,483 health care workers** trained on the project's e-learning platform, for whom 1,665 e-learning accounts were created on the platform for access to continuous education.

The project assisted **supportive supervision visits to 649 vaccination sites.**

- Address gaps and challenges in human resource mobilization and coordination at the facility level.
- Provide hands-on training and technical support on project tools.

# Background

In Vietnam over 10.3 million COVID-19 cases were reported as of September 2022, and 43,057 of those cases ended in deaths.[1] The fourth and most devastating wave of COVID-19 in Vietnam began on April 27, 2021, when cases with unknown infection sources and epidemiological links to establish chains of transmission increased.

In the effort to fight the COVID-19 pandemic, the Government of Vietnam (GVN) aimed to achieve herd immunity by the first quarter of 2022, with 70 percent of its population vaccinated. On July 10, 2021,the GVN launched its largest national vaccination campaign for the COVID-19 vaccine. By September 2021, the Vietnam Ministry of Health (MOH) had received a total of 34,144,240 doses of vaccines from a variety of sources including COVAX, donations, and bilateral procurement, and had administered 33,087,984 doses. Despite the many early successes of Vietnam's national vaccination campaign, certain challenges remained, including the ongoing need for clearer and faster dissemination of policies and practices to health workers, gaps in tools needed to optimize planning and efficiency, and persistent challenges in reaching hard-to-reach populations.

In particular, the country's limited resources for initial vaccination efforts were concentrated in hotspots of larger cities, industrial zones, major ports, and densely populated urban areas, leaving significant gaps in remote, rural, mountainous, and generally underserved populations. Thus, despite rising national coverage rate by the end of 2021, lower coverage rates persisted among populations residing in remote, mountainous areas with limited transportation, ethnic minority populations, migrant workers, and people with disabilities. Communes in these areas were not only far from health centers, limiting access to care as well as supportive supervision visits from upper levels, but they also faced resource constraints that resulted in limited equipment and skilled human resources, posing greater challenges for COVID-19 vaccination implementation. From November 2021 to September 2022, the project built on its strong partnership with Vietnam's MOH and deep immunization experience in the country to assist the National Expanded Program on Immunization (NEPI) to identify and implement strategies to reach remote populations in five northern mountainous provinces identified by NEPI: Dien Bien, Son La, Hoa Binh, Quang Nam, and Ninh Thuan.[2]

1 General Department of Preventive Medicine. "Vietnam COVID-19 Data". https://ncov.vncdc.gov.vn/viet-nam-full.html. Accessed September 30, 2022.
2 World Health Organization (WHO). Vietnam COVID-19 Situation Report #99. Report as of September 13, 2022. https://www.who.int/vietnam/internal-publications-detail/covid-19-in-viet-nam-situation-report-99.

# Project Overview

**The MOMENTUM Routine Immunization Transformation and Equity project (the project) aims to strengthen routine immunization programs to overcome entrenched obstacles that contribute to stagnating and declining immunization rates and barriers to reaching zero-dose and under-immunized children with life-saving vaccines. The project also provides technical support for COVID-19 vaccination and supports countries to mitigate the consequences of the pandemic on immunization services. The project is implemented by JSI Research & Training Institute, Inc. along with PATH, Accenture Development Partnerships, Results for Development, CORE Group, and The Manoff Group. Building on U.S. Agency for International Development's (USAID's) long-standing partnership with the health sector in Vietnam, the project provides technical support to help vaccinate communities in five hard-to-reach, mountainous provinces — Dien Bien, Son La, Hoa Binh, Quang Nam, and Ninh Thuan — against COVID-19.**

Recognizing the very specific challenges that prevent the GVN from reaching all clients with COVID-19 vaccination services, USAID provided American Rescue Plan Act funding to the project from November 2021 to September 2022 to provide targeted technical support at the sub-national level for microplanning, capacity building, and monitoring and evaluation. The project provided technical assistance in the fives provinces in the northern and central regions and worked closely with the National Expanded Program on Immunization (NEPI) and the Northern and Central Regional Expanded Programs on Immunization (EPI) to support:

- Capacity-building for both health and non-health workforce on COVID-19 vaccination through intensive training-of-trainers, cascade training, and e-Learning, using materials consolidated from World Health Organization (WHO)/United Nations Children's Fund (UNICEF)/NEPI trainings.

- Development of a provincial model package of interventions to support and implement COVID-19 vaccination based on an initial situational analysis with a focus on identifying and reaching elderly, disabled, and geographically hard-to-reach populations. This package included:

    - Strengthening multi-sectoral coordination mechanisms.
    - Building human resource capacity for vaccine deployment.
    - Strengthening supportive supervision and microplanning activities.
    - Strengthening the cold chain/supply management system.
    - Supporting data capture and use in COVID-19 vaccination including coverage.
    - Monitoring adverse events following immunization.

- Refinement of the model package based on challenges or gaps identified through continuous supportive supervision and monthly district and quarterly provincial meetings.

- Dissemination of evidence and key lessons from implementing model packages in the selected provinces to regional, national, and global audiences.

# Areas of Support

To accelerate COVID-19 vaccination uptake among vulnerable and hard-to-reach populations, the project provided technical assistance to the MOH for vaccination service delivery, policies, microplanning and coordination, and COVID-19 human resources for health, training and supervision. This work aligns closely with GVN priorities and protocols.

## TECHNICAL AREAS

- **Vaccination service delivery**
- **Policies, microplanning and coordination**
- **COVID-19 human resources for health, training, and supervision**

**Nov 2021**
Built consensus on implementation strategy.

**Nov–Dec 2021**
Conducted situational analysis process and reported on key findings.

**Dec 2021**
Started strengthening workforce capacity for COVID-19 vaccination through training-of-trainers and cascade training on data use and quality project tools, and good storage practice (GSP).

**Feb 2022**
Supported roll out of first mobile vaccination sites.

**Mar 2022**
Conducted high-level scientific panel discussion on COVID-19 vaccination for children ages 5-11 years.

**Jun 2022**
Conducted mid-term review meeting.

**Sept 2022**
Introduced and conducted the COVID-19 vaccination course on the e-learning platform.

**Oct 2022**
Conducted MOMENTUM webinar to share lessons from Vietnam.

**Nov 2022**
Held final dissemination workshop in Hanoi.

# Reaching Underserved and Priority Populations

## Vaccine Service Delivery

Vietnam achieved relatively high rates of COVID-19 vaccination coverage, reaching 80 percent of the total population by April 3, 2022, leaving the difficult stage of last-mile vaccination: reaching underserved populations. A critical first step was understanding circumstances and barriers of each locality, such as those in remote, mountainous areas with limited transportation, as well as the needs of priority groups for COVID-19 vaccination, including ethnic minorities, migrant workers, and people with disabilities. Population fluctuation and mobility, especially in the mountainous and border areas, made it challenging to determine true vaccination coverage.

Mobile vaccination strategies have long been the means to provide routine immunization to ethnic minorities, mountainous village inhabitants, and children migrating across the border with Laos. This became the compelling strategy to reach the last-mile COVID-19 vaccination. While the majority of mobile vaccination sites were set up in village cultural houses, as they are for routine immunization, many new sites were used including kindergartens, public schools, and community gathering halls. Teachers, farmers, and local store owners were recruited and quickly trained to support different roles, including welcoming, verifying vaccination subjects, and entering data. These mobile vaccination sites extended the network of village health collaborators in the area.

From late January to the end of March 2022, the project supported a survey in Dien Bien and Son La Provinces, for which village health workers and staff from the COVID-19 community teams visited households to identify unvaccinated or not fully vaccinated people to inform planning (Table 1). With the addition of three new provinces in April 2022, the project applied learning from Son La and Dien Bien, and tried a slightly different and more cost-effective approach. Given the much larger area and population and limited resources in these three provinces, the project used data from the COVID-19 vaccination system as well as provincial population and housing statistics to identify the remaining target population. The project conducted household surveys in all disadvantaged villages and communes (48.6 percent of all communes in five provinces), as defined and categorized by the government's socio-economic, cultural, and educational indicators. The project identified **1,696,284** unvaccinated or not fully vaccinated people.

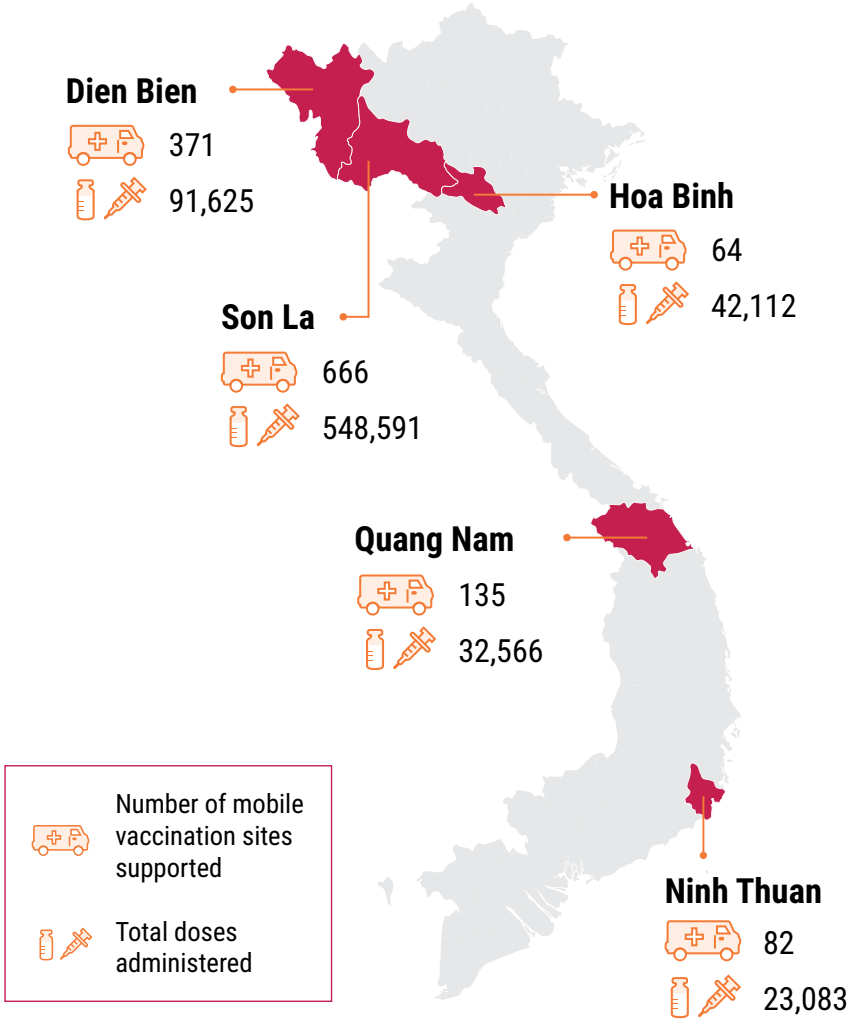
Table 1. Number of Unvaccinated or Partially Vaccinated Identified by the Project's Survey and Triangulation Approaches, by Province (January–June 2022)

| Province | 1st dose not received | 2nd dose not received | Booster not received | Total |
|---|---|---|---|---|
| Dien Bien | 56,606 | 55,835 | 140,937 | **253,378** |
| Son La | 187,569 | 42,330 | 313,939 | **543,838** |
| Hoa Binh | 76,441 | 52,344 | 160,821 | **289,606** |
| Quang Nam | 143,479 | 168,007 | 173,649 | **485,135** |
| Ninh Thuan | 22,500 | 39,177 | 62,650 | **124,327** |
| **Total** | 486,595 | 357,693 | 851,996 | **1,696,284** |

**"My whole village has been vaccinated here. We wouldn't have come to town as by the time I get there the sky will be dark."**

Field worker from Da Phen 3 village who was vaccinated when she picked up her child after work at the kindergarten mobile vaccination site.

Figure 1: Number of Individuals Vaccinated during Mobile Vaccination Campaigns Supported by the Project




Besides identifying the unvaccinated and under-vaccinated population, these surveys also sought out the reasons for these delays or refusals. Many delays were due to the geographical and physical challenges in getting to the vaccination sites. A mobile vaccination strategy was thus applied to reach out to these populations. To increase efficiency at mobile vaccination sites, the team carefully mapped the clusters of villages, identified the appropriate location and time for particular groups to receive vaccination, and communicated clearly in advance of the mobile vaccination clinics. For example, with the field workers, commune health workers would set up their mobile vaccination sites among the fields, and the sessions would be carried out after 5:00 p.m. once they were finished with their work. For villages that are remote with difficult dirt roads, health workers would cluster several villages together with the support from the heads of villages to bring out the elderly population and people with disabilities to the most convenient culture house in the area. When the vaccine target population extended to children in March 2022, schools became an important location for mobile vaccination, with teachers as essential advocates. Commune health staff are continuing the effort to vaccinate the remaining population in their commune health centers.

A total of **1,318 mobile vaccination sites** established with project support administered.

The project supported the government of Vietnam to administer **737,877 COVID-19 vaccination doses** at these sites.

# Strategizing to Improve Community Health Systems

## Policies, Microplanning, and Coordination

Reaching all eligible people with COVID-19 vaccination was urgent to help control the pandemic. Immunization staff at the grassroots level struggled to adapt to ever-changing vaccine supply availability, vaccine policies, a stretched workforce, and financial constraints. Planning at the grassroots level was done quickly and may have lacked the detail and data-driven decision-making for precise and adequate planning.

The project worked with provincial teams in Dien Bien and Son La to develop and introduce a standard toolkit for consistent, detailed microplanning that uses high-quality supply and consumption data. The toolkit included:

- Guidelines on microplanning based on WHO guidelines for COVID-19 vaccination issued in late 2021 and NEPI/MOH directives.
- Templates for each vaccine arrival phase.
- A detailed pre-formatted Excel template to calculate the variables of vaccination implementation—vaccine and supply availability, cold chain capacity, health sector human resource availability, availability of non-health-sector actors, and target populations.

The project tested the tool at the district level in Dien Bien and Son La. Microplanning meetings were conducted in both provinces with participants from the National Institute of Hygiene and Epidemiology (NIHE), provincial departments of health (DOHs), provincial Centers for Disease Control and Prevention (CDC), district health centers, and the project team. Following the meetings, the two provincial DOHs agreed to apply the microplanning guidelines in the next plans for each vaccine arrival at all levels, with a special focus on hard-to-reach populations. As updated guidelines on COVID-19 vaccination doses were issued throughout the project duration, the provincial CDC issued official letters to districts and communes, which updated their microplans accordingly. The project's microplanning tool was adjusted to include children's doses and appropriate syringes, first and second booster doses for those eligible, and time required between doses. The Excel-based tool leaves room for modification and requires immunization managers to have intermediate-to-advanced Excel skills and thorough understanding of new guidelines and policies when they are issued. The project staff supported provincial EPI staff to modify the tools and create a plan to hand them to provincial staff. In addition, the project developed a Google form that incorporates daily aggregate reporting data elements such as the number and type of vaccine doses administered and number of people vaccinated by age group and gender, as required by the government. Reporting data from the Google form were then fed into the commune microplanning tool, completing the data feedback loop.

**Microplanning was a key approach to identify and develop strategies to reach underserved and priority populations.**

Once the microplanning tool was tested, modified, and updated in Dien Bien and Son La in February and March 2022, it was rolled out quickly following training in Hoa Binh, Quang Nam, and Ninh Thuan, ensuring more efficient vaccine delivery services. The use of the microplanning tool was reinforced throughout all project activities, including training, supportive supervision, and regular health sector review meetings. Additionally, the project liaised closely with provincial leadership to ensure ongoing commitment and engagement in all five provinces. This commitment supported facility-level staff to conduct their immunization activities and ensured efficient allocation of vaccines and other resources throughout administrative areas. A total of 1,485 facilities in the project-supported provinces are reporting that they have used the microplanning tool to develop vaccine arrival or disbursement and immunization plans.

**“It is so much easier now for me to put together all 11 commune plans into the district plan. The numbers are the actual totals calculated, rather than estimated or guessing. I also feel confident that numbers from each and every one of the 11 commune plans are calculated consistently.”**

**Ms. Thuy of the Nam Giang district immunization staff, who was in charge of planning immunization activities, distribution and supply in the 11 communes of her district.**

**1,485 facilities** used the microplanning tool created by the project to develop **vaccine arrival** and **immunization plans**.

While the COVID-19 response committee was led by the chair of the local people’s committee, the project recognized the important role of the health sector in the committee and guided coordinated, multisectoral actions in response to the changing situation. In this context, the project supported regular review meetings for the health sector at both district and provincial levels, with 237 meetings conducted. Typical review meetings started with updates on the COVID-19 vaccination campaign, reported progress in activities (e.g., the household vaccination survey, mobile vaccination sites, vaccination results), presented challenges (e.g., lack of vaccines for second and third doses, lack of diluent for Pfizer vaccine, the H’mong ethnic group declining vaccination), and proposed temporary and long-term solutions.

Clarification of MOH guidance on COVID-19 vaccination for 5- to 12-year-olds was provided to ensure health care workers at the facility level understood and could apply the new guidelines in various situations. Clarifications included points on the type of vaccine for children, appropriate dosage, use of specialized syringes, time between doses or infections, parental consent, and adverse events following immunization. Strategies to reach the children in and out of school, including through summer activities and engaging teachers in advocacy and support, were discussed.

Other challenges were identified concerning data quality and cleaning and clients’ unique identification numbers, cold chain supply management, GSP requirements and certification, uptake in the 5–12 age group, and booster doses for adults. Coordination with other sectors included police to synchronize citizen ID numbers for data cleaning; education to promote vaccination for children and obtain parental consent; and the people’s committees for leadership, commitment to, and overall support for boosters and child vaccination. These solutions often needed to be escalated to the higher levels and required engagement with the political system to coordinate with non-health sectors. These review meetings were also a chance to reinforce the new microplanning tools for consistent use throughout the provinces.

# Strengthening the Health Workforce

## COVID-19 Human Resources for Health, Training, and Supervision

The health workforce had been stretched thin throughout the pandemic, not only due to the tremendous amount of work in response but also due to many health care workers contracting COVID-19. As a result, the vaccination workforce was continually changing and rotating among departments. The national COVID-19 vaccination campaign also continuously changed its target group focus, guidelines for different populations, policies on authorized vaccines, and safety measures. Therefore, training, refresher training, and up-to-date and readily available training materials were paramount to ensuring sufficient human resource capacity for the campaign.

The project established a technical working group (TWG) with Vietnam's NEPI along with the northern and central EPI. The TWG reviewed all training materials that had been disbursed throughout the country and regions on COVID-19 vaccine deployment. As the pandemic situation and vaccination targets changed quickly, many policies and strategies did too, but training materials were not updated accordingly. Furthermore, previous training materials and sessions lacked practical and up-to-date instructions, making it difficult for lower-level staff to conduct relevant and timely trainings.

The TWG conducted a desk review of the latest guidelines from WHO and other countries/regions with similar EPI structures—most notably the Pan American Health Organization, whose guidelines provide detail down to the commune-level subdivisions. Integrating these updated guidelines and policies, the TWG revised the MOH and NEPI training materials to include the following modules:

- Overview of COVID-19 pandemic and vaccines.
- Cold chain supply for COVID-19 vaccines.
- Microplanning to reach every community with a focus on hard-to-reach populations at the last mile of COVID-19 vaccination.
- Managing an immunization session.
- Injection safety.
- Monitoring and surveillance.
- Partnering with the communities.
- Supportive supervision (for provincial and district-level staff) and guides for virtual training.

Post-tests for each module were also designed to help evaluate the learning progress, as were two-day training-of-trainer sessions which were designed with hands-on and practice time for provincial and district-level staff for two days, preferably on-site.Cascade training was designed as one-day virtual sessions for commune-level staff (except for those who have limited infrastructure and capacity, who are trained in person).

Based on the findings from the situation analysis, the TWG tailored training materials to each province's needs by focusing on:

- Health care worker capacity in microplanning, especially in provinces where COVID-19 vaccination was yet to be held at the commune level (Ninh Thuan, Quang Nam), with mock-up activities for immunization session management and flow.
- Specialized fridges available at each province with time for hands-on demonstration.
- Safety for particular vaccines available at each province.
- Data entry, consolidation, and use of Google sheet/form to support the new vaccine system.
- Grid search and vetting for last-mile vaccination.

Training-of-trainer sessions were conducted for CDC, provincial hospital, district health center and private hospital staff, and representatives from the non-health sector such as the provincial people committee, Department of Education and Training, and Department of Information and Communication. Trainers included experts from NEPI, regional EPI, and National Children Hospital, and project officers. Following these, each province rolled out a plan for cascade training to 3,316 commune-level staff. They were held online with two staff from each commune and conducted by provincial CDCs and district health center staff with technical support from the northern EPI and the project.

The project did the following based on results from review meetings, supportive supervision, and feedback from immunization staff:

- Although GSP certificates are required at all district-level facilities, immunization, pharmaceutical, and vaccine storage staff expressed unease with operating and maintaining cold chain equipment to ensure vaccine quality and safety. The project developed and updated materials for GSP training from NEPI, adapting from the updated MOH/NEPI and WHO guidelines. The project worked with NIHE to review and finalize the materials.

- Consolidated the updated guidelines from NIHE for children ages 5–11 years, along with references from the manufacturers (Pfizer and Moderna), into succinct training materials. The project conducted online training sessions for immunization staff at all levels and integrated the new guidance into review meetings. Immunization staff were updated on the policies, guidelines, and best practices for the new age group in anticipation of the new vaccine arrival.

- Conducted in-person refresher training on project tools and data use and quality as travel and social gathering restrictions loosened. Hands-on practice of the microplanning tools on provided laptops was especially efficient.

Furthermore, the project used an existing e-Learning platform developed as part of a previous project as a channel for immunization staff and health care workers to have quick, equitable access to the most up-to-date knowledge and practices throughout the country. The project, in coordination with the NEPI, modified, converted, and uploaded an updated module on COVID-19 vaccination to the eLearning platform.

Following training and review meetings, supportive supervision was essential to reinforce new skills and evaluate how well facility-level health care workers were using their knowledge and skills. These visits were an opportunity to determine if the strategies introduced remained appropriate and relevant for localities with varying resources and conditions. The project aligned these visits with the provincial supportive supervision and the communes' COVID-19 vaccination schedules to observe immunization sessions, particularly at mobile vaccination sites. The project also developed tools through Google forms to help supervisors go through the checklist for the supportive supervision visits at immunization sessions and health facilities. The tools were tested as printed versions and on smartphones/PCs to ensure usability.

The project virtually trained **2,483 health care workers** for whom **1,665 accounts** were created, for continuing education on COVID-19 vaccination courses. The project is handing over this eLearning platform to NEPI for management of the system and the training content for continued use by health care workers.

**A total of 649 facilities were visited for supportive supervision across the five provinces. The visits typically included the following, depending on need:**

- Hands-on coaching on the microplanning tool and the Google form for daily data reporting.
- Data cross-check to ensure quality and mitigate duplication and issues with citizen identification numbers.
- Cold chain management, including inspection of vaccine storage capacity, temperature monitoring, and practices to ensure compliance with international and MOH guidelines.
- Observation of commune-organized mobile vaccine sites, including set-up following the four-step procedure from the vaccination guidelines, and coordination with local authorities, community leaders, and other sectors to ensure safe and effective immunization.

# Immunization Systems Strengthening

## Filling in the Gaps for COVID-19 Vaccination Coverage

Working with GVN and other stakeholders the project made significant strides in improving planning, service delivery, and immunization systems. Perhaps more importantly, the project's contributions and innovations are already being scaled-up to other provinces and considered for integration into routine immunization.

In the first several months of COVID-19 vaccination, Vietnam was able to vaccinate a large portion of the eligible population. However, challenges remained for health care workers to vaccinate some, including ethnic minorities in remote mountainous villages who are unaware of the importance of COVID-19 vaccines. The last-mile vaccination effort exposed the many gaps in the immunization system including human resource mobilization and coordination, cold chain supply, vaccination session and data management, injection safety, and microplanning. The project helped close these gaps by:

- Strengthening the immunization system at the sub-national level through: 1) capacity building for health and non-health sector staff; 2) developing context appropriate digital tools to support microplanning and daily data reporting; and 3) supportive supervision and regular review meetings.

- Providing technical and financial support for mobile vaccination strategy.

While the number of mobile COVID-19 vaccination sites established and doses administered illustrates the project's success, its immunization system strengthening efforts will have longer-term benefits for routine immunization, too.

The project-developed daily data reporting Google form, microplanning tool, and supportive supervision Google form have mitigated COVID-19 vaccination-related challenges in recording and managing data and information. While the vaccination data Google form has provided a quick fix to alleviate data aggregation issues with the national system, it is recognized as a temporary solution. The microplanning tool has the potential to be adapted for use for routine immunization, and for

### "They don't come to us, we have to go to them!"

**Head of Chieng Khua commune health center in Son La about reaching the Thai, H'Mong, and Muong populations, which make up more than 80 percent of the 5,000 people living in Chieng Khua.**

catch-up campaigns and supplementary immunization activities that call for resource mobilization beyond the norm. The project-introduced tools have both national applicability, as well as applicability beyond COVID-19 vaccination. The NEPI and regional EPI teams recognize the benefits of the microplanning tool and have suggested national scale-up. The microplanning tool could be used to support upcoming OPV, IPV, and MR campaigns. The supportive supervision Google forms could be modified for supportive supervision of technical areas outside of COVID-19 vaccination. Two M-RITE supported provinces have adapted these tools for supportive supervision of JE vaccination, while another province uses adapted tools for RI. As a result of project support, health care workers at facility and management levels have increased confidence using Google forms/sheets, appreciate their benefits, and are mastering their functions to efficiently support their work.

Lastly, project interventions in five provinces were consolidated into a sub-national model package for COVID-19 vaccination, serving as a guide with step-by-step implementation that other provinces may apply for their own campaigns as well as other countries to refer to as they develop COVID-19 vaccination strategies.

As the project concluded, these tools were handed to NEPI and regional EPI to support health care workers in the project's five provinces and other provinces throughout Vietnam as resources allow. The project's work in the five provinces set a practical, proven model for others to follow. It is understood that the more provinces that adopt these tools, the more standardized the process and efficient higher-level management will be.

# Lessons Learned

**Strong commitment from multi-sectoral, coordinated parties and adaptive leadership approach** for the evolving COVID-19 vaccination situation are essential.

- Under the direction of the Government, the Steering Committees led by the people's committee at all levels (central, provincial, district and commune) have proactively responded to the COVID-19 pandemic by facilitating the multi-sectoral coordination among government bodies and in collaboration with international partners, including the WHO and UNICEF. Close collaboration with NEPI, regional EPIs and provincial CDCs have been essential for all project activities.

- Situation analyses showed a more complete picture of the vaccination campaign down to the commune level. The project has used these findings to align its work with province, district, and commune needs.

- As the national COVID-19 vaccination campaign was being deployed rapidly at scale and vaccines were arriving in bulk, the project focused support on provinces most in need. For example, depending on vaccine arrival time, the project in some cases proceeded with micro-planning first, even before training trainers, to ensure provinces were ready for the vaccines. Supportive supervision visits were scheduled concurrently with vaccine arrival to observe and support immunization staff.

**Collective efforts** to overcome challenges benefit all facilities when learning and dissemination is well coordinated.

- While few challenges are unique to a province, district, or commune, provinces seem to deal with them in a siloed fashion. While consolidating situation analysis findings, the project realized that it could share various provincial experiences and approaches to overcome common challenges.

- Through regular supportive supervision of health workers at provincial, district, and commune levels, daily data reviews at the commune level, and monthly review meetings at the provincial and district levels, the project has helped identify barriers and strategies to overcome them, and shared lessons between communes and districts. In addition, weekly internal project meetings were opportunities to cross-check the project's provincial progress and challenges, evaluate approaches, and identify promising practices and strategies.

- Insights from this continuous learning process informed adaptations of the project's implementation approach, support to the GVN, and decision-making within provincial programs to promote equitable COVID-19 vaccination coverage.

**Innovative simple digital tools** for rapid data-driven decision making are pivotal when resources are constrained.

- The use of the Google form and micro-planning tools improved the quality and timeliness of data for COVID-19 vaccination planning while reducing the burden on health care workers. The micro-planning tool in particular facilitated community and district decision-making and COVID-19 vaccination resource forecasting.

- Investing in a standardized tool with high levels of buy-in from all levels of the health system across geographic areas improved efficiency and coordination.

- Digital solutions were only effective when they were tailored to local contexts and based on user needs.

- Providing sufficient initial training and ongoing mentorship as a holistic change management approach was critical to the uptake and sustainability of project-generated tools.

**Previous lessons learned** were critical to the success of this project.

- Digital solutions are most effective when they are tailored to local contexts.

- Providing sufficient initial training and ongoing mentorship was critical to the utility and sustainability of project-generated tools.

# A Way Forward

While the project had a time-limited engagement in Vietnam, it made important contributions to the COVID-19 vaccination campaign in Dien Bien, Son La, Hoa Binh, Quang Nam, and Ninh Thuan. With its rapid activities and innovative interventions, the project reached underserved and priority populations with COVID-19 vaccines and provided a model that NEPI and regional EPI can apply and adapt for other provinces. The project's model intervention package has been shared nationally and with other countries in the region that have similar contexts. This collaboration and communication with the global community to distribute lessons learned has strengthened our response to this pandemic and those that have yet to come.

Additionally, many of the project's contributions—including strengthened health worker capacity through training and supportive supervision, the development and scale of the microplanning tool, and relationship-building and coordination across administrative levels—will continue to benefit routine immunization beyond the project's end. Together, these contributions have increased immunization service delivery and resource forecasting expertise at local levels while building trust in coordination systems that may be used for other vaccine campaigns and rollout of other health interventions.

Readers can find additional information about MOMENTUM Routine Immunization Transformation and Equity's work in Vietnam at the following websites:

**MOMENTUM Website:** https://usaidmomentum.org/where-we-work/vietnam/

**NIHE Website (in Vietnamese):** https://nihe.org.vn/vi/hop-tong-ket-du-an-ho-tro-ky-thuat-trien-khai-chien-dich-tiem-chung-vac-xin-covid-19-tai-viet-nam-du-an-usaid-momentum-chuyen-doi-va-cong-bang-trong-tiem-chung-thuong-xuyen

**"We already used the microplanning tools for our JE vaccine catch-up campaign, just needed to update the target population and the vaccine, but the rest on cold chain capacity, human resources, volunteers, timeline, supply calculation remain the same. We can really use this for any future campaign that is not the routine on the NIIS."**

**Dien Bien CDC health care worker prepares a COVID-19 vaccination dose.**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